

AMENDMENTS TO THE CLAIMS

1-38. (Canceled)

39. (Previously Presented) A printed circuit board for providing crosstalk compensation in an electrical connector, comprising:

a plurality of conductive traces;

a first compensation structure providing a first crosstalk compensation signal having a first magnitude to a first of the plurality of conductive traces; and

a second compensation structure providing a second crosstalk compensation signal having a second magnitude to the first of the plurality of conductive traces;

wherein a ratio of the first magnitude to the second magnitude varies with frequency.

40. (Previously Presented) The printed circuit board of Claim 39, wherein the first compensation structure comprises a capacitor that includes a first dielectric constant material having a first rate of decline with frequency, and wherein the second compensation structure comprises a capacitor that includes a second dielectric constant material having a second rate of decline with frequency, and wherein a difference between the first rate of decline and the second rate of decline is in the range of about 0.15 to about 0.45 per decade of frequency.

41. (Previously Presented) The printed circuit board of Claim 40, wherein the first rate of decline is about 0.2 per decade of frequency across the frequency range of 1 MHz to 1 GHz.

42. (Previously Presented) The printed circuit board of Claim 40, wherein the first rate of decline is about 0.4 per decade of frequency across the frequency range of 1 MHz to 1 GHz.

43. (Previously Presented) The printed circuit board of Claim 40, wherein the second rate of decline is substantially flat with frequency across the frequency range of 1 MHz to 1 GHz.

44. (Previously Presented) The printed circuit board of Claim 39, wherein the first compensation structure comprises a capacitor that includes a high slope dielectric constant

material.

45. (Previously Presented) The printed circuit board of Claim 43, wherein the second compensation structure comprises a capacitor that includes a low slope dielectric constant material.

46. (Previously Presented) The printed circuit board of Claim 39, wherein the first crosstalk compensation signal and the second crosstalk compensation signal have different polarities and wherein a time delay is present between the first and second compensation signals.

47-55. (Canceled)

56. (Previously Presented) A printed circuit board for an electrical connector, the printed circuit board comprising:

- a plurality of conductors;

- a first capacitor electrically connected to a first of the conductors, the first capacitor having a first dielectric with a first dielectric constant slope; and

- a second capacitor electrically connected to the first of the conductors, the second capacitor having a second dielectric with a second dielectric constant slope,

wherein a difference between the first dielectric constant slope and the second dielectric constant slope is at least 0.15 per decade of frequency.

57. (Previously Presented) The printed circuit board of Claim 56, wherein one of the first dielectric constant slope and the second dielectric constant slope is substantially constant across the frequency range of about 1 MHz to about 1 GHz.

58. (Canceled)

59. (Previously Presented) A printed circuit board comprising:

- a plurality of conductive paths that extend from a plurality of respective inputs of said printed circuit board to a plurality of respective outputs of said printed circuit board;

- a first compensation stage for capacitively coupling crosstalk compensation having a first polarity onto a first path of said plurality of conductive paths, said first compensation stage including at least one first capacitive element that includes a first dielectric constant material that

has a first rate of change with frequency; and

a second compensation stage for capacitively coupling crosstalk compensation having a polarity opposite the first polarity onto said first path of said plurality of conductive paths, said second compensation stage including at least one second capacitive element that includes a second dielectric constant material that has a second rate of change with frequency, wherein the first rate of change and the second rate of change differ by between about 0.15 to about 0.45 per decade of frequency.

60. (Previously Presented) The printed circuit board of Claim 59, wherein the first rate of change is about 0.2 per decade of frequency across the frequency range of 1 MHz to 1 GHz.

61. (Previously Presented) The printed circuit board of Claim 59, wherein the first rate of change is about 0.4 per decade of frequency across the frequency range of 1 MHz to 1 GHz.

62. (Previously Presented) The printed circuit board of Claim 59, wherein the second rate of change is substantially flat with frequency across the frequency range of 1 MHz to 1 GHz.

63. (Previously Presented) The printed circuit board of Claim 59, wherein the first and second rates of change are pre-selected to reduce the near-end crosstalk on said first path of said plurality of conductive paths in the 1 MHz to 100 MHz frequency range when a high crosstalk plug is electrically connected to said plurality of respective inputs, and to reduce the near-end crosstalk on said first path of said plurality of conductive paths at frequencies above 250 MHz when a low crosstalk plug is electrically connected to said plurality of respective inputs.

64-97. (Canceled)